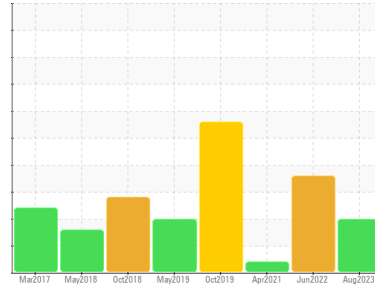




# PROBLEM SUMMARY

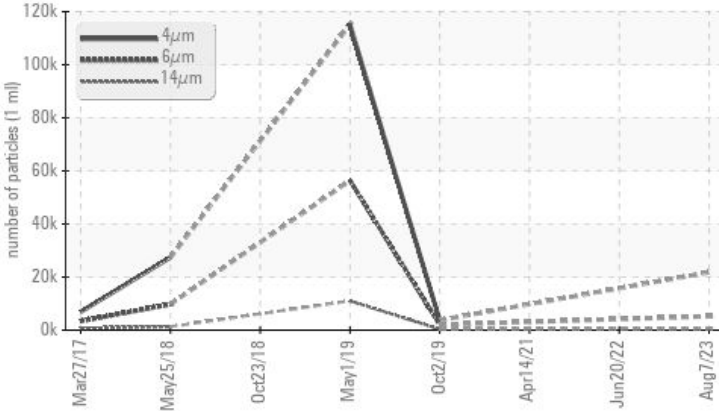
Sample Rating Trend



Machine Id  
**KAESER SM 18 1393121 (S/N 1016)**  
 Component  
**Compressor**  
 Fluid  
**KAESER SIGMA (OEM) M-460 (--- QTS)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >6µm	ASTM D7647	>1300	▲ 5210	---	---
Particles >14µm	ASTM D7647	>80	▲ 480	---	---
Particles >21µm	ASTM D7647	>20	▲ 131	---	---
Particles >38µm	ASTM D7647	>4	▲ 5	---	---
Oil Cleanliness	ISO 4406 (c)	>--/17/13	▲ 22/20/16	---	---

Customer Id: LINUPP  
 Sample No.: KC108718  
 Lab Number: 05927853  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

There are no recommended actions for this sample.

## HISTORICAL DIAGNOSIS

### 20 Jun 2022 Diag: Jonathan Hester

#### WATER



The filter change at the time of sampling has been noted. We were unable to perform a particle count due to a high concentration of particles present in this sample. We advise that you stop the unit and follow the water drain-off procedure for this component. We recommend an early resample in 500 hours to monitor this condition. All component wear rates are normal. Free water present. There is a high concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 14 Apr 2021 Diag: Doug Bogart

#### VIS DEBRIS



We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 02 Oct 2019 Diag: Don Baldrige

#### WATER



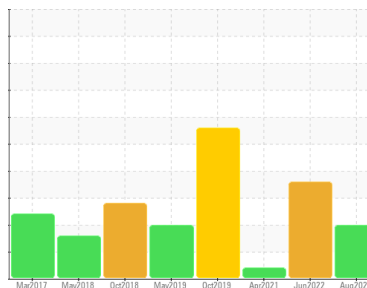
Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition. All component wear rates are normal. There is a high amount of particulates present in the oil. There is a moderate concentration of water present in the oil. Excessive free water present. The AN level is acceptable for this fluid.

view report



Machine Id  
**KAESER SM 18 1393121 (S/N 1016)**

Component  
**Compressor**  
Fluid  
**KAESER SIGMA (OEM) M-460 (--- QTS)**



## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a high amount of particulates present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>KC108718</b>	KCP49553	KCP35627
Sample Date	Client Info			<b>07 Aug 2023</b>	20 Jun 2022	14 Apr 2021
Machine Age	hrs	Client Info		<b>93456</b>	93168	92912
Oil Age	hrs	Client Info		<b>0</b>	2906	2636
Oil Changed	Client Info			<b>N/A</b>	Not Changd	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>2</b>	4	1
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>6</b>	9	5
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Antimony	ppm	ASTM D5185m		<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

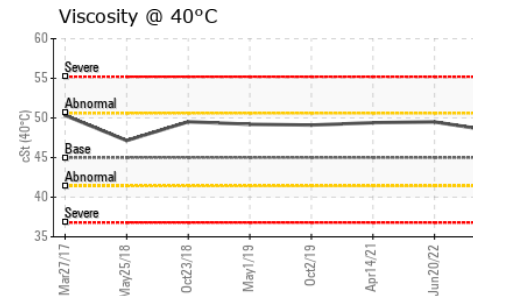
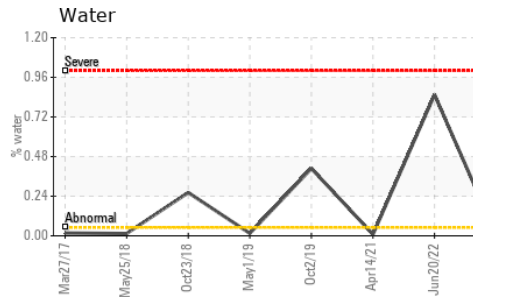
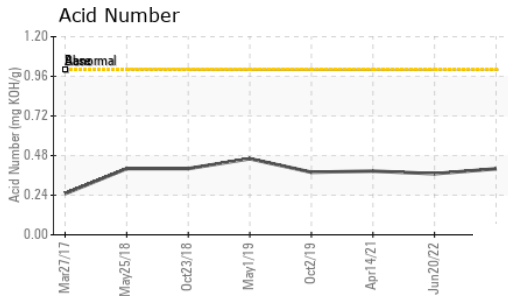
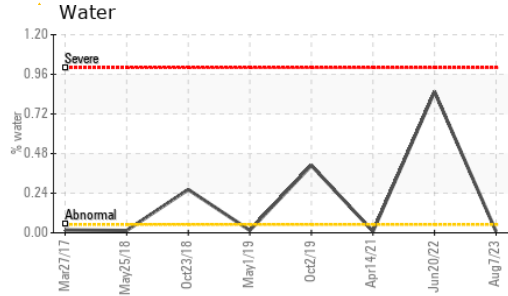
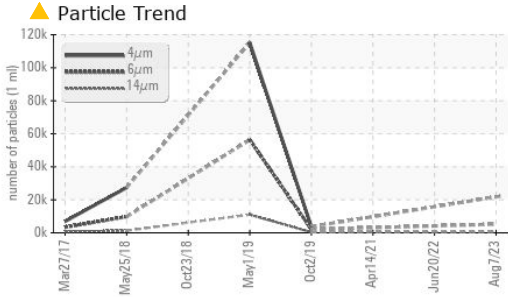
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	<1	12
Barium	ppm	ASTM D5185m	90	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	100	<b>4</b>	0	6
Calcium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m	0	<b>&lt;1</b>	2	4
Zinc	ppm	ASTM D5185m	0	<b>24</b>	0	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	0
Sodium	ppm	ASTM D5185m		<b>1</b>	0	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Water	%	ASTM D6304	>0.05	<b>0.008</b>	▲ 0.855	0.009
ppm Water	ppm	ASTM D6304	>500	<b>81.8</b>	▲ 8550	99.2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>21789</b>	---	---
Particles >6µm		ASTM D7647	>1300	▲ <b>5210</b>	---	---
Particles >14µm		ASTM D7647	>80	▲ <b>480</b>	---	---
Particles >21µm		ASTM D7647	>20	▲ <b>131</b>	---	---
Particles >38µm		ASTM D7647	>4	▲ <b>5</b>	---	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>--/17/13	▲ <b>22/20/16</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	<b>0.40</b>	0.37	0.386

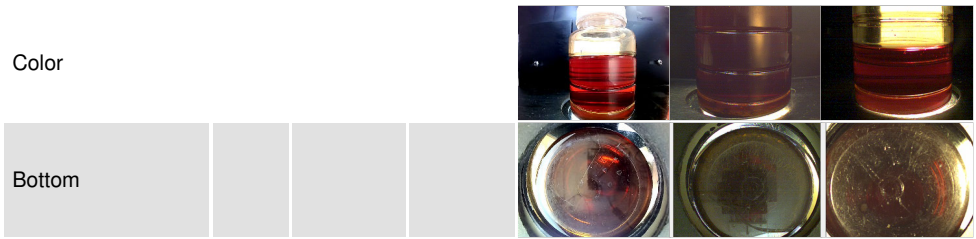
# OIL ANALYSIS REPORT



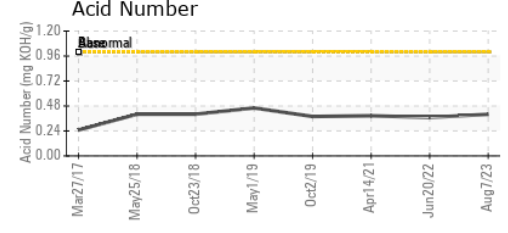
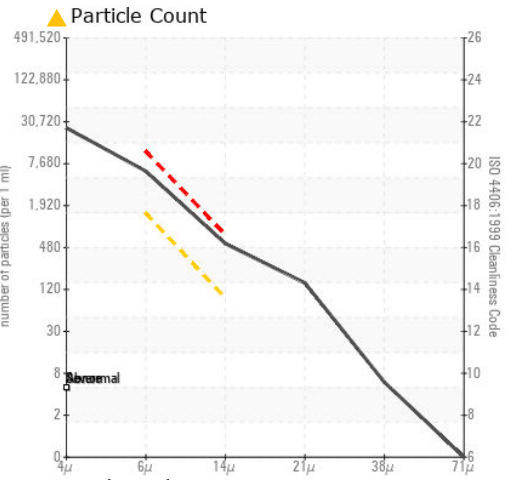
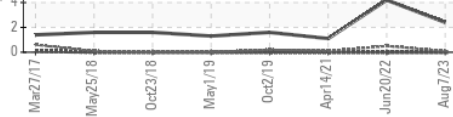
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	▲ MODER
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	0.2%
Free Water	scalar	*Visual		NEG	▲ 1.0

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45	48.3	49.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KC108718 **Received** : 17 Aug 2023  
**Lab Number** : 05927853 **Diagnosed** : 18 Aug 2023  
**Unique Number** : 10607800 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

**LINEMARK PRINTING**  
 501 PRINCE GEORGES BLVD  
 UPPER MARLBORO, MD  
 US 20774  
 Contact: SERVICE MANAGER

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:  
F: